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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,610	03/20/2001	Julio Huato	3639-0101P	9560

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EXAMINER

CHOI, FRANK I

ART UNIT	PAPER NUMBER
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1616

DATE MAILED: 12/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/811,610

Applicant(s)

HUATO ET AL.

Examiner

Frank I Choi

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 19, 21 objected to because of the following informalities: Dependent claims should immediately follow the claim on which it is directly dependent, i.e. claim 17.

Appropriate correction is required. There was no direction in the Amendment (9/23/2002) to cancel claims 18,20,22.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-18, 23 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the specified anions, does not reasonably provide enablement for anions in general. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. The applicant broadly claims a colloidal copper which by the claim definition can contain any anion and does not have to be an anion chosen from "A" but can consist solely of "B". However, the Specification only provides a limited number of working examples of "A" and none of "B". The prior art appears to indicate that not all copper salts will produce colloidal copper (US Pat. 4,681,530, Column 7, lines 43-60). As such, it appears that one of ordinary skill in the art would be required to do undue experimentation in order to determine what other anions would be suitable either in combination of the "A" anions or alone.

Examiner has duly considered Applicant's arguments but deems them unpersuasive.

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Applicant argues that the testing of compounds would only constitute routine investigation. However, because the claims read on any anion, one of ordinary skill would be required to do undue experimentation in order to determine which anions would form colloidal copper compounds as it taught in the art that not all copper salts will produce colloidal copper. Further, as to Applicant's example of $\text{Cu}_2(\text{OH})\text{citrate}$, said example falls outside of the scope of the claimed invention. The claimed invention indicates that the formula is $\text{Cu}_m\text{A}_x\text{B}_y$, where $mx + ny = 2$. Citrate has a oxidation number of 3, as such there is no way that citrate can be within the formula. Also, Cu has no coefficient so there can only be a single copper.

Claims 1-18, 23 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1-18, 23 now recite C1-C20 straight or branched chain hydrocarbons, or an aromatic group as an anion. However, the Specification listed these as being within the variable "R" not as anions. Pg. 10, paragraph 0042. Further, the language of the claims as originally filed in view of the Specification cannot be read to include the hydrocarbons or aromatic group as being within the list of anions. As such, the amendment above does not appear to have been contemplated at the time Application was filed and appear to constitute new matter.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-25 recite the colloidal cupric compound has a formula CuA_xB_y where A and B are anions, $0 \leq x \leq 2$, $0 < y \leq 2$ and $mx + ny = 2$, where m and n are the oxidation numbers of the anions. However, two of the anions listed, phosphate and citrate have oxidation numbers of 3 and OH, the hydrocarbons, aromatic group and amino acid residue do not have any oxidation numbers. As such, it is uncertain how these anions fit with the claimed formula. Further, colloidal copper citrate in the Specification is represented by $\text{Cu}_2(\text{OH})\text{citrate}$. However, in addition to the above, the formula has no coefficient associated with "Cu" so there can be only a single copper.

Claims 1, 6-10, 14-25 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: The claims indicate that the Cu^{2+} solution is purified by adding an oxidizing agent and H_3PO_4 to the solution, however, in purifying a substance typically the substance is separated from impurities present in the substance. The purifying step in the claims, as amended, do not appear to remove any impurities or otherwise separate the substance from the impurities. In this case, the Specification indicates after the oxidizing agent and H_3PO_4 are added, the pH is adjusted to 3, the solution heated and subsequently the solid precipitate was removed by filtration.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Brasch (US Pat. 4,681,630).

Brasch expressly discloses a colloidal copper prepared from copper sulfate pentahydrate and method of preparing the same falling within the scope of applicant's claims (Column 6, lines 40-66). Examiner notes that claims 1-8 are drawn to a composition, as such, although the process of making the composition is different in certain aspects, since the composition appears to be the same, i.e., a copper colloid, the prior art composition appears to anticipate the composition claims.

Alternatively, at the very least the claimed invention is rendered obvious within the meaning of 35 USC 103, because the prior art discloses products and uses that contain the same exact ingredients/components as that of the claimed invention. See *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980). See also *In re May*, 197 USPQ 601, 607 (CCPA 1978) and *Ex parte Novitski*, 26 USPQ2d 1389, 1390-91 (Bd Pat. App. & Inter. 1993).

Examiner had duly considered Applicant's arguments but deems them unpersuasive.

Applicant argues that Brasch does not teach the claimed purification process. Examiner cannot but agree with Applicant's assertion, however, in a product-by-process claim Applicant must show that the claimed process results in a product having unexpected properties from the prior art product. Also, contrary to Applicant's argument in example 4, the pH raises from 2.5 to 7 (Column 6, lines 61-64). Finally, Applicant has not shown that the process completely results in metallic colloid (See Claim 3).

Claims 1-8, 17, 18, 23 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 96/10918

WO 96/10918 expressly discloses an aqueous colloidal suspension containing a cupric salt, such as cupric nitrate, copper sulfate, copper chloride, having a pH of about 7 which is used to protect plants from fungi falling within the scope of applicant's claims (See Pgs. 3, 4).

Alternatively, at the very least the claimed invention is rendered obvious within the meaning of 35 USC 103, because the prior art discloses products and uses that contain the same exact ingredients/components as that of the claimed invention. See *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980). See also *In re May*, 197 USPQ 601, 607 (CCPA 1978); *Ex parte Novitski*, 26 USPQ2d 1389, 1390-91 (Bd Pat. App. & Inter. 1993).

Claims 1-8, 17-25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Casale (Abstract).

Casale expressly discloses a colloidal suspension prepared from CuSO₄ pentahydrate containing citric acid which is effective against vine disease falling within the scope of applicant's claims (Abstract).

Alternatively, at the very least the claimed invention is rendered obvious within the meaning of 35 USC 103, because the prior art discloses products and uses that contain the same exact ingredients/components as that of the claimed invention. See *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980). See also *In re May*, 197 USPQ 601, 607 (CCPA 1978); *Ex parte Novitski*, 26 USPQ2d 1389, 1390-91 (Bd Pat. App. & Inter. 1993).

Claims 1-8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Paal et al. (Abstract) or Bannigan, Jr. (US Pat. 4,253,843).

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Paal et al. expressly discloses a colloidal copper hydroxide prepared from copper sulfate falling within the scope of applicant's claims (Abstract).

Bannigan, Jr. expressly discloses a colloidal copper phosphate prepared from copper sulfate falling within the scope of applicant's claims (Column 4, lines 40-46).

Alternatively, at the very least the claimed invention is rendered obvious within the meaning of 35 USC 103, because the prior art discloses products and uses that contain the same exact ingredients/components as that of the claimed invention. See *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980). See also *In re May*, 197 USPQ 601, 607 (CCPA 1978); *Ex parte Novitski*, 26 USPQ2d 1389, 1390-91 (Bd Pat. App. & Inter. 1993).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

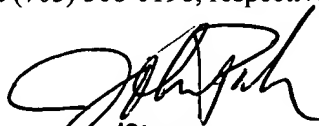
A facsimile center has been established in Technology Center 1600. The hours of operation are Monday through Friday, 8:45 AM to 4:45 PM. The telecopier numbers for accessing the facsimile machines are (703) 308-4556 or (703) 305-3592.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Choi whose telephone number is (703) 308-0067. Examiner maintains a flexible schedule. However, Examiner may generally be reached Monday-Friday, 8:00 am – 5:30 pm (EST), except the first Friday of the each biweek which is Examiner's normally scheduled day off.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. José Dees, can be reached on (703) 308-4628. Additionally, Technology Center 1600's Receptionist and Customer Service can be reached at (703) 308-1235 and (703) 308-0198, respectively.

FIC

December 11, 2002


JOHN PAK
PRIMARY EXAMINER
GROUP 1000

